

The Plant Kingdom

Anyone work at Scott's?
Supersbre? Suber's? We need
some flowers to dissect."

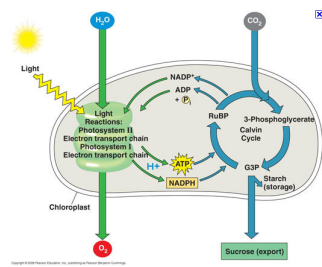
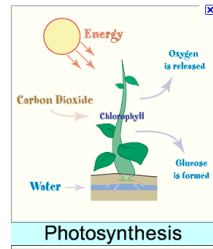
1. Give the names of 4 plants you are familiar with.
2. Name the most simple plant you know.
3. Give reasons why a plant is a plant and not another type of organism.
4. Why are humans dependent on plants while at the same time plants are dependent on humans

Kingdom: Plantae Chapters 22 to 25

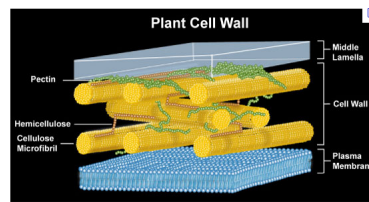
https://www.youtube.com/watch?v=X4L3r_XJW0I

Shared Characteristics

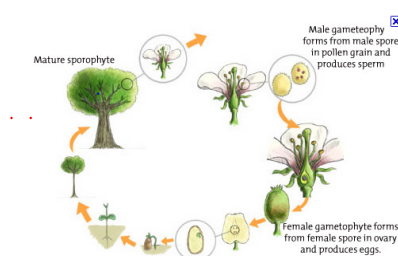
- all go through photosynthesis



- all have cell walls made of cellulose
- a polysaccharide (many sugars bonded together)



- have multi cellular embryo's (fertilized egg)
- eukaryotic
- sessile
- life cycles have two alternating phases called **alternation of generation**
- which simply means that during their life they will reproduce asexually at 1 point and sexually at another



Whats an electron?

Where can you find them?

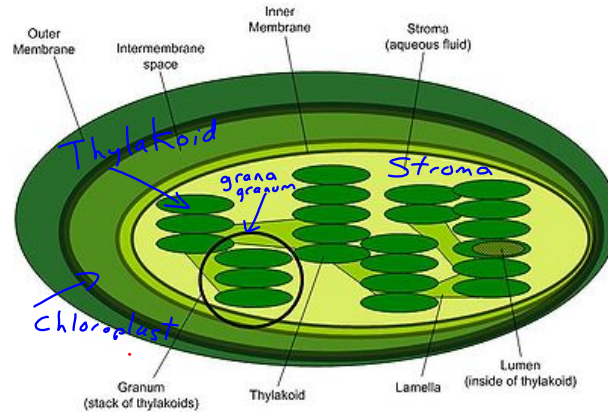
What are they capable of doing?

Photosynthesis

Why are plants dependent on animals and vice versa?

Photosynthesis

- occurs in the chloroplasts of green plants and plant-like protists



- Thylakoids membranes contain the chlorophyll
- granum(a) is a stack of thylakoids
- stroma is the fluid filled area around the grana

Photosynthesis is a 2 part reaction:

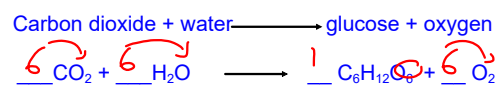
Part 1 Light Reaction

- light energy is absorbed by the chlorophyll in the thylakoid membranes
- the energy excites ^{charges} electrons in the chlorophyll
- once charged these electrons will be carried to the stroma as part of a compound called ~~NADPH~~ (think of this as shovel carrying hot coals from a fire to a new place to start another fire)
- the charged up electrons will be used to form glucose in part 2 of photosynthesis
- the electrons are in constant supply as they come from the breaking down of water. Enzymes found on the inner surface of the thylakoids break H_2O into H_2 and O_2 and electrons
- the H_2 will be used to make glucose and the O_2 will be released for organisms to use in cellular respiration

Part 2 Light independent reaction (Dark Reaction)

- occurs in the stroma
- the charged up electrons from part 1 use their energy to combine/weld the H_2 from water with CO_2 to form glucose $C_6H_{12}O_6$

Formula:



Photosynthesis Questions

1. What are the ingredients (reactants) needed for photosynthesis?
 2. What is the name of stage 2 of photosynthesis and where does it occur?
 3. What is NADPH's job?
 4. Why is water needed in photosynthesis?
 5. How does glucose form?
 6. Where is chlorophyll found and what is it's job?
 7. State the balanced formula for photosynthesis.
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1. What is the scientific name for moss and their relatives?
2. What are the 2 reasons moss are considered the most simplest of plants?
3. Name 2 relatives of moss.